STATEMENT OF LEGAL AND FACTUAL BASIS

Pulaski Furniture Corp.
Pulaski, Virginia

Permit No. VA-20470

Permit Date: March 14, 2002

Registration No. 20470
AIRS ID No. 51-155-0001

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Pulaski Furniture Corp. has applied for a Title V Operating Permit for its wood furniture manufacturing plant located at 205 5th Street in the town of Pulaski, VA. The Department has reviewed the application and has prepared a Title V Operating Permit.

FACILITY INFORMATION

Permittee	Facility
Pulaski Furniture Corp.	Pulaski Furniture Corp. (Pulaski Plant)
P.O. Box 1371	205 5th Street
Pulaski, VA 24301	Pulaski, VA 24301

SOURCE DESCRIPTION

SIC Code: 2511 - wood household furniture manufacturing.

This is a conventional household wood furniture manufacturing plant. The facility is located in downtown Pulaski at 205 5th Street, and consists of plants # 1 plus # 5, and plant # 12. The biggest part is the single grouping of plants # 1 plus # 5. It is covered by the 10-24-85 new source review (NSR) permit, as revised 12-8-87 and 8-18-00, to reconstruct the woodworking and finishing processes. Plant # 12 is the "mini-plant", which was added per the March 1, 1994 NSR permit covering just the addition. Plant # 12 consists of its own woodworking and finishing processes to produce its own limited product line. The addition of plant # 12 was not subject to PSD due to voluntary (beyond BACT) VOC and particulate emission limitations.

Overall, the plant receives and dries rough sawn lumber, performs various woodworking processes, and finishes the wood (primarily spray stains, spray sealers, and spray lacquers). Finishes are spray booth applied VHAP compliant VOC based wood furniture coatings. In addition, except for off-line repair and miscellaneous coating, plant # 12 uses a catalytic oxidizer VOC fume incinerator to control all its finishing VOC emissions and reduce its VHAP emissions beyond normally using VHAP compliant coatings.

All woodworking dust emissions are controlled by baghouse fabric filters, except for enclosed closed loop cyclones and a few enclosed fabric filters that do not vent outside. Heat is supplied by burning dry wood in the plant's two (2) wood-fired boilers. Wood feed into the boilers is enclosed direct feed from enclosed wood fuel storage bins. The plant's auxiliary fuel is No. 2 fuel oil, which is burned in the larger wood fuel boiler. Both boilers are existing pre-1972 emission units, but they are both included in the 10-24-85 NSR permit, as revised.

The facility is a Title V major source due to emissions of VOC exceeding 100 tons/yr, potential to emit (PTE) emissions exceeding 100 tons/yr for SO2 for No. 2 fuel oil auxiliary fuel, combined HAPS exceeding 25 tons/yr, and PTE exceeding 10 tons/yr for each of the following individual HAPS: methanol, methyl ethyl ketone, ethyl benzene, toluene, ethylene glycol monobutyl ether, xylene, and chromium complex. Except for chromium complex being particulates, all these HAPS are VOCs and VHAPS from finishing operations.

The wood furniture MACT, 40 CFR 63 Subpart JJ, does apply to the facility, as an existing source, even for plant #12, normally applying only to finishing. NSPS, such as 40 CFR 60 Subpart Dc, does not currently apply to anything at the plant. This facility is a PSD definition major source due to VOC PTE emissions exceeding 250 tons/yr. It is located in an attainment area for all pollutants.

COMPLIANCE STATUS

The facility is inspected at least once per year. The facility was in compliance with the State Air Pollution Control Board Regulations during the last inspection, which was conducted on June 26, 2001.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units are grouped as follows:

ES-B (Boilers B1, B2) (ES-1 & 2) Emission Source-Boilers. Fueled mostly by dry furniture plant wood. Auxiliary fuel is No. 2 fuel oil.

ES-WD (ES-5 & 8) Emission Source-Wood working. Includes all woodworking equipment with dust emissions, including wood hogging and wood fuel material transfers. All wood dust emissions are controlled by 10 baghouses exhausting to atmosphere, plus closed loop cyclones or any internal fabric filters without exhausts to atmosphere.

ES-F (ES-4 & 7) Emission Source-Finishing. All finishing and related VOC emissions, primarily 18 spray booths for plants #1 & 5, plus all plant #12 mini-plant finishing. The wood furniture MACT, 40 CFR 63 JJ, does apply to this facility. Overspray particulates from all spray booths are controlled by spray booth dry filters or water wash spray booths at a minimum.

EMISSIONS INVENTORY

Emissions are summarized in the following tables.

1996 Actual Emissions from AIRS with the corrected PM-10 amount for ES-F*.

	Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM-10	NO_x
ES-B, (Boilers 1, 2).	8.5	24.	1.	6.6	17
ES-WD, Woodworking including hogging and wood fuel transfers.	-	-	-	52.5	-
ES-F, Finishing and related.	351.3	-	-	7.9*	-
Total	**359.8**	**24.**	**1.**	**67**	**17.**

* Corrected PM-10 amount for ES-F (conservative estimate calculation) = 456.2 tpy coating w/o incineration x 23% solids x 50% overspray x 15% beyond spraybooth filtration = 7.9 tpy particulate

emission.

1996 Facility Hazardous Air Pollutant (HAPS) Emissions from Title V permit application.

Pollutant	Hazardous Air Pollutant Emission in Tons/Year
Methanol, Methyl Ethyl Ketone, Ethyl Benzene, Toluene, Ethylene Glycol Monobutyl Ether, Xylene, Chromium Complex.	Major (over 10 tons/yr PTE) of each individual substance listed.

Combined HAPs (primarily VOC HAPS).	Major (over 25 tons/yr) for combined HAPs (primarily VOC HAPS).

EMISSION UNIT APPLICABLE REQUIREMENTS – ES-B, Boilers B1, B2 (ES 1, 2).

The plant has two (2) boilers. B1 is a 20 million Btu/hr input capacity (1.25 tons/hr wood fuel) Keeler boiler. B2 is an 80 million Btu/hr input capacity (5 tons/hr wood fuel) Union Iron Works boiler. The plant's primary fuel is hogged and smaller dry furniture plant wood fuel, with enclosed feed from the enclosed wood fuel storage bins. Boilers B1 and B2 were constructed well before 1972. The only auxiliary fuel is No. 2 fuel oil, which can be burned in the larger wood-fuel boiler B2. For permit completeness, both boilers were included in the 10-24-85 NSR permit, as revised, to reconstruct the woodworking and finishing processes for plants #1 plus #5. The boilers are subject to no NSPS or MACT requirements at this time.

A. Limitations:

1. Particulate emissions from wood-fired boilers B1 and B2 shall be controlled by the use of a multicyclone on each boiler, at a minimum.
(9 VAC 5-80-110, 9 VAC 5-170-160)

2. Sulfur dioxide emissions from wood-fired boiler B1 (Keeler boiler) shall be controlled by limiting the fuel to furniture plant wood fuel, or DEQ approved equivalent.
(9 VAC 5-80-110, 9 VAC 5-170-160)

3. Sulfur dioxide emissions from boiler B2 (Union Iron Works boiler) shall be controlled by limiting fuel to furniture plant wood fuel and No. 1 or No. 2 distillate fuel oil, or DEQ

approved equivalent. (9 VAC 5-80-110, 9 VAC 5-170-160)

4. The approved fuel for boiler B1 (Keeler boiler) is wood fuel, or DEQ approved equivalent. The wood fuel shall be dry and hogged or smaller as fed to the boiler. A change in the fuels may require a permit to modify and operate. (9 VAC 5-80-110, 9 VAC 5-170-160, 10-24-85 **NSRPC*** 13) *
NSRPC = New Source Review Permit Condition

5. The approved fuels for boiler B2 (Union Iron Works boiler) are wood fuel and No. 1 or No. 2 distillate fuel oil, or DEQ approved equivalent. The wood fuel shall be dry and hogged or smaller as fed to the boiler. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396-78 "Standard Specification for Fuel Oils". A change in the fuels may require a permit to modify and operate. This B2 boiler shall consume no more than 43,800 tons per year of wood fuel (5 tons/hr capacity x 8760 hrs/yr), calculated monthly as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-110, 9 VAC 5-170-160, 10-24-85 NSRPC 14)

6. Emissions from the operation of boiler B1 (Keeler 20 million Btu/hr boiler) shall not exceed the limits specified below:

Total Suspended Particulate	0.33** lbs/ million Btu input	6.6 lbs/hr
PM-10	0.33** lbs/million Btu input	6.6 lbs/hr
Sulfur Dioxide	2.64* lbs/million Btu heat input	hourly emission limit

* The SO_2 emission limit is actually much cleaner than this value due to other conditions for this boiler limiting the fuel to wood. Wood fuel SO_2 emissions calculate to negligible (less than 1 ton/yr) per 1999 AP-42 emission factors.
** At rated capacity.
(9 VAC 5-80-110, 9 VAC 5-40-900A1b and B, 9 VAC 5-40-930A1, 10-24-85 NSRPC 11)

7. Emissions from the operation of boiler B2 (Union Iron Works 80 million Btu/hr boiler) shall not exceed the limits specified below:

Total Suspended	0.33** lbs/ million Btu input	26.4 lbs/hr

Particulate		
PM-10	0.33** lbs/ million Btu input	26.4 lbs/hr
Sulfur Dioxide	2.64* lbs/million Btu heat input	hourly emission limit

* The SO_2 emission limit is actually much cleaner than this value due to other conditions for this boiler limiting the fuel to wood and distillate (No. 1 or 2) fuel oil. The No. 2 distillate fuel oil definition limits maximum sulfur content to 0.5wt%, which calculates to only approximately 0.52 lb SO_2/million Btu when using 1999 AP-42 emission factors. Wood fuel SO_2 emissions calculate to negligible (less than 1 ton/yr) per 1999 AP-42 emission factors.

** At rated capacity.

(9 VAC 5-80-110, 9 VAC 5-40-900A1b and B, 9 VAC 5-40-930A1, 10-24-85 NSRPC 11)

8. Visible emissions from each of the B1 and B2 boilers shall not exceed 20 percent opacity as determined by 40 CFR 60 Appendix A method 9, except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity. (9 VAC 5-80-110, 9 VAC 5-40-940)

Monitoring/O & M/Recordkeeping:

The permit includes requirements for monitoring and maintaining records of all monitoring and testing required by the permit. The inspections, maintenance, monitoring and recordkeeping requirements in this section, plus monitoring and recordkeeping under the Facility Wide and General Conditions Sections below, constitute the periodic monitoring requirements for this equipment group. The monitoring and records include:

1. Visible emissions periodic monitoring is required to assure control equipment maintenance and compliance with permit visible emission limits. This requires a weekly observation, and its recording, of each boiler to check for any visible emissions. If any visible emission is observed, the condition shall be corrected and recorded, or a 40 CFR 60 Appendix A Method 9 visible emission evaluation performed and recorded to check opacity compliance. Refr. 9 VAC 5-80-110 E.

2. Develop an inspection schedule, monthly at a minimum, to insure operational integrity of the boilers and multicyclones, and maintain records of inspection results.

3. Develop a maintenance schedule and maintain records of maintenance, have written operating procedures available, and train operators in the proper operation of the equipment and emission

controls.

4. Distillate oil: The permittee shall obtain a certification, or alternative statement since NSPS does not apply, from the fuel supplier covering each shipment of distillate oil. Each fuel supplier certification or alternative statement shall include the following:

   a. The name of the fuel supplier,

   b. The date on which the oil was received,

   c. The amount of distillate oil delivered in the shipment,

   d. A statement that the oil complies with the American Society for Testing and Materials (ASTM) specifications for fuel oil numbers 1 and 2, and

   e. The sulfur content of the oil.

   (9 VAC 5-80-110)

5. Boilers B1, B2: The permittee shall maintain records of all emission data and operating parameters necessary to demonstrated compliance with this permit. The content of and format of such records shall be arranged with the Director, West Central Regional Office. These records shall include, but are not limited to:

   a. The monthly throughput of wood fuel and fuel oil for all the boilers. The monthly throughput shall be calculated monthly.

   b. Monthly particulate and sulfur dioxide emissions in tons for all the boilers. The monthly quantities shall be calculated monthly. The emission factors, control efficiencies, and emission calculation equations used in these emission calculations shall be identified and readily available. Note that the SO2 2.64 lbs/million Btu emission limit is met by burning only (1) wood because it has negligible sulfur content and (2) No 2 fuel oil because its sulfur content is limited by definition to 0.5 percent, which calculates to only approximately 0.52 lb/million Btu [AP-42 emission factor: (142S lb/1000 gal) x (S=0.5) x (1/137 million Btu/1000 gal) = 0.52 lb/million Btu.] The particulate emission limit of 0.33 lbs/million Btu is met by the No. 2 fuel oil having almost negligible particulate emissions, and when burning wood compliance is assured by a combination of operator training, maintenance and records, inspections at least monthly and records, weekly opacity checks and records, and the 0.30 lbs/million Btu AP-42 (rev. 7/01) emission factor for dry wood, as required by this permit, being cleaner than the 0.33 Title V permit limit. This combination is considered to constitute adequate periodic monitoring for these boilers at this plant. The lbs/hr particulate emission limits are met as long as the

lbs/million Btu are met because the hourly limits are the lbs/million Btu values times boiler hourly rated capacities. The permit contains no annual emissions limits for the boilers.

c. Results of all stack tests, visible emission evaluations and performance evaluations.

(9 VAC 5-80-110, 9 VAC 5-40-50)

Testing: As requested by EPA, periodic stack testing for particulate emissions is required for the large 80 million Btu/hr Union Iron Works wood fuel boiler B2, but not for the small 20 million Btu/hr Keeler wood/oil boiler B1.

Once per permit term a performance test (stack test) shall be conducted for particulate emissions from the large wood fuel boiler, B2 (Union Iron Works 80 million Btu/hr input capacity boiler), to determine compliance with the particulate emission limits in this permit (condition #7). These tests shall be performed within three (3) years after the beginning of each 5 year term of this permit. The tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-40-30. The details of the tests are to be arranged with the Director, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the West Central Regional Office within 45 days after test completion and shall conform to the DEQ test report format.

At the option of the permittee, this stack test may be delayed, even indefinitely, with notification to DEQ and adequate recordkeeping, until the wood fuel throughput for this boiler exceeds 50% of the annual throughput limit in this permit, calculated monthly as the sum of each consecutive twelve (12) month period (boiler B2 annual limitation is 100 percent annual capacity factor = 5 tons/hr wood fuel boiler capacity x 8760 hrs/yr = 43,800 tons/yr wood fuel throughput capacity/limit x 50% = 21,900 tons/yr wood fuel optional stack testing trigger). Assuming continued operation of this boiler, the delayed test shall be performed no later than 180 days after exceeding the 50% annual throughput amount. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method - Subject to DEQ approval at the time of the test (except for Method 9). (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, or DEQ approved method
SO2	Fuel analysis, EPA Method 6, or DEQ approved method
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

Reporting: Title V semi-annual reports of the results of monitoring and recordkeeping for each first and second half calendar year are required to be submitted to DEQ by each March 1 and September 1 respectively.

EMISSION UNIT APPLICABLE REQUIREMENTS - 1 - Wood Working - Refr. ES-WD (ES-5 & 8).

This equipment group includes all of this wood furniture plant's wood working processes and equipment, including wood hogging and wood fuel material transfers. All wood dust emission sources are controlled by 10 baghouses (fabric filters) exhausting to atmosphere, plus closed loop cyclones and any internal fabric filters without exhasts to atmosphere.

All wood emissions from plants #1 plus #5 are covered by the 10-24-85 NSR permit, as revised, and are controlled by six (6) baghouses exhausting to atmosphere. Rated throughput capacity is 6,250 Brd-ft/hr. All wood emissions from the mini-plant, plant #12, are covered by the 3-1-94 NSR permit and are controlled by four (4) baghouses exhausting to atmosphere. The mini-plant's rated throughput capacity is 1700 Brd-ft/hr.

There is no applicable NSPS (40 CFR 60) at this time for this process. The wood furniture plant MACT (40 CFR 63 Subpart JJ) does not apply to the woodworking materials and processes that are currently used at this plant.

A. Limitations:

1. *Plants #1, #5, #12*: Particulate emissions from all wood dust emission points to atmosphere (ES-WD) for plants #1, #5, and the mini-plant, plant #12, including all wood working equipment, wood hogging, and wood fuel material transfers, shall be controlled by baghouses (fabric filters), unless controlled by closed loop cyclones, enclosed direct boiler feeds, or internal fabric filters without exhausts to atmosphere, or DEQ approved equivalent. The fabric filters shall be provided with adequate access for inspection and maintained by the permittee such that they are in proper working order. (9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-170-160, 10-24-85 NSRPC 4, 3-1-94 NSRPC 4 and5)

2. *Plants #1 plus #5 throughput:* The annual throughput of wood for plants #1 plus #5 shall not exceed 30,000,000 Brd-ft (approximately 51,000 tons), calculated monthly as the sum of each consecutive twelve (12) month period. (9 VAC 5-80-110, 9 VAC 5-50-20, 9 VAC 5-170-160, 10-24-85 NSRPC 3)

3. *Plant #12, mini-plant, throughput:* The annual throughput of wood for the mini-plant, plant #12, shall not exceed 8,333,000 Brd-ft (approximately 14,000 tons), calculated monthly as the sum of each consecutive twelve (12) month period. (9 VAC 5-80-110, 9 VAC 5-50-20, 9 VAC 5-170-160, 3-1-94 NSRPC 10)

4. *Plants #1 and #5 emissions*: Particulate emissions from each wood dust baghouse (fabric filter) exhausting to atmosphere for plants #1 and #5, shall not exceed 0.05 grains per standard cubic foot of exhaust gas. (9 VAC 5-80-110, 9 VAC 5-40-2270, 9 VAC 5-50-10 D)

5. *Plants #1 plus #5 emissions*: Particulate emissions from all wood dust baghouses (fabric filters) combined exhausting to atmosphere for plants #1 plus #5 shall not exceed the limits specified below:

Total Suspended Particulate	22.0 lbs/ hr	53.0 tons/yr
PM-10	22.0 lbs/hr	53.0 tons/yr

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-80-1700, 10-24-85 NSRPC 8)

6. *Plant #12, mini-plant emissions*: Particulate emissions from each wood dust baghouse (fabric filter) exhausting to atmosphere for the mini-plant, plant #12, shall not exceed 0.005 (not 0.05) grains per standard cubic foot of exhaust gas. (9 VAC 5-80-110, 9 VAC 5-40-2270, 9 VAC 5-50-10 D, 9 VAC 5-50-260, 9 VAC 5-80-1700, 3-1-94 NSRPC 18)

7. *Plant #12, mini-plant emissions*: Particulate emissions from all wood dust baghouses (fabric filters) combined exhausting to atmosphere for the mini-plant, plant #12, shall not exceed the limits specified below:

Total Suspended Particulate	5.14 lbs/ hr	12.6 tons/yr
PM-10	5.14 lbs/hr	12.6 tons/yr

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-80-1700, 3-1-94 NSRPC 18)

8. *Plants #1, #5, #12 visible emissions*: Visible emissions from each baghouse (fabric filter) exhausting to atmosphere for all wood dust emission points (ES-WD) for plants #1, #5, and the mini-plant, plant #12, shall not exceed five (5) percent opacity, except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-80-110, 9 VAC 5-50-80, 9 VAC 5-50-20, 9 VAC 5-50-260, 10-24-85 NSRPC 9, 3-1-94 NSRPC 21)

9. *Plant #12, mini-plant, fugitive emissions*: Visible emissions from any fugitive emission points for plant #12, the mini-plant, shall not exceed ten (10) percent opacity.
(9 VAC 5-80-110, 9 VAC 5-50-80, 9 VAC 5-50-20, 9 VAC 5-50-260, 3-1-94 NSRPC 22)

Monitoring/O & M/Recordkeeping:

The permit includes requirements for monitoring and maintaining records of all monitoring and testing required by the permit. The inspections, maintenance, monitoring and recordkeeping requirements in this section, plus monitoring and recordkeeping under the Facility Wide and General Conditions Sections below, constitute the periodic monitoring requirements for this equipment group. The monitoring and records include:

1. Visible emissions periodic monitoring is required to assure control equipment maintenance and

compliance with permit visible emission limits. This requires a weekly observation, and its recording, of each emission point in this emissions group to check for any visible emission. If any visible emission is observed, the condition shall be corrected and recorded, or a 40 CFR 60 Appendix A Method 9 visible emission evaluation performed and recorded to check opacity compliance. This requirement is to assure good control of particulate emissions. Refr. 9 VAC 5-80-110 E.

2. The pressure drop across each baghouse shall be continuously measured and recorded weekly. This requirement is to help assure good control of particulate emissions.

3. Develop an inspection schedule, monthly at a minimum, to insure the operational integrity of the fabric filters, and maintain records of inspection results.

4. Develop a maintenance schedule and maintain records of maintenance, have written operating procedures available, train operators in the proper operation of the equipment and controls affecting emissions, and maintain an inventory of spare parts needed to maintain the fabric filters in proper working order to minimize emissions.

5. The annual throughput of wood shall be calculated monthly as the sum of each consecutive twelve (12) month period.

6. Title V periodic monitoring to assure meeting the particulate emission limit of 0.05 grains/scf of exhaust gas TSP and PM-10 for plants #1 and #5, and 0.005 grains/scf for plant #12, the mini-plant, is satisfied by the periodic monitoring that assures good baghouse operation and maintenance, periodic inspections and recordkeeping, and periodic visible emission observations to assure that the 5% opacity requirements are met (normally zero opacity). The particulate lb/hr limits are met as long as the grains/scf limits are met and the air handling system capacity (number of baghouses) is not increased. The particulate tons/yr limits are met as long as the lbs/hr limits are met and the plant wood throughput limits are met.

Testing: The permit does not require source tests for this process. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method - Subject to DEQ approval at the time of the test (except for Method 9).

	(40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, or DEQ approved method.
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

Reporting: Title V semi-annual reports of the results of monitoring and recordkeeping for each first and second half calendar year are required to be submitted to DEQ by each March 1 and September 1 respectively.

EMISSION UNIT APPLICABLE REQUIREMENTS 2 - Finishing - Refr. ES-F (ES-5).

This group includes all finishing for this plant. It includes all finishing related VOC emissions. 40 CFR 63 Subpart JJ, the wood furniture MACT, does apply, as an existing source, even for plant #12. The plant's primary method for meeting the MACT is to normally use only compliant coatings, where required. This is true even in the mini-plant, plant #12, where all on-line finishing emissions are controlled by VOC fume incineration, which coincidently reduces VHAP emissions beyond MACT requirements. The VOC fume incinerator is not intended or needed as the method to comply with the MACT. VOC fume incinceration is strictly in addition to MACT requirements. VOC fume incineration is used so the mini-plant #12 does not trigger PSD permitting regulations for VOC emissions from the mini-plant. There is no applicable NSPS (40 CFR 60) for this process at this time.

All *finishing emissions from plants #1 and #5* are covered by the 10-24-85 NSR permit. There are no add-on VOC controls for this portion of the plant, which includes 18 spray booths.

All *finishing emissions from the mini-plant, plant #12*, are covered by the 3-1-94 permit. Except for (1) a modest amount of VOC from off-line repair without VOC fume incineration and (2) a modest amount of VOC from miscellaneous finishing that is not controlled by VOC fume incineration (currently includes (a) water based roll coater and (b) VOC based on-line touch-up spray booth primarily for inside corners missed by electrostatic sprays), all VOC based finishing emissions for the mini-plant are controlled by a 95% efficient catalytic oxidizer VOC fume incinerator. The catalytic oxidizer is preceded by a HEPA filter to protect the catalyst by eliminating overspray non-volatile emissions. Rated capacity for the mini-plant is (1) 30 gallons/hr coating (controlled by the catalytic oxidizer), plus (2) 0.75 gal/hr coating for off-line repair and (3) 1.5 tons/mo VOC for miscellaneous coating without fume incineration. The mini-plant VOC based on-line finishing equipment consists primarily of an electrostatic frame spray system, molding spray system, flat line spray system, one main touch up spray system, and associated ovens, all controlled by VOC fume incineration. The molding and flat line work may also be accomplished in the frame spray system with the same emission controls

Limitations:

1. *Plants # 1 & # 5 finishing controls:* Overspray particulate emissions from each finishing spray booth shall be controlled by dry filters or water wash spray booths at a minimum. The overspray particulate controls shall be provided with adequate access for inspection and maintained by the permittee such that they are in proper working order.
(9 VAC 5-80-110, 9 VAC 5-50-260, 10-24-85 NSRPC 7)

2. *Plant # 12, mini-plant finishing controls:* Overspray particulate emissions from each finishing spray booth that are not controlled by the catalytic oxidizer particulate protection system, such as repair and inside corner touch-up, shall be controlled by dry filters or water wash spray booths at a minimum. The overspray particulate controls shall be provided with adequate access for inspection and maintained by the permittee such that they are in proper working order.
(9 VAC 5-80-110, 9 VAC 5-50-260, 3-1-94 NSRPC 7)

3. *Plant # 12, mini-plant finishing controls:* Overspray particulate emissions from each finishing spray booth controlled by catalytic oxidation VOC fume incineration, including spraying all frames, moldings, flat boards, and the main on-line touch-up, shall be controlled by a 99.8% efficient HEPA filter or equivalent that protects the catalytic oxidizer. The overspray particulate controls shall be provided with adequate access for inspection and maintained by the permittee such that they are in proper working order.
(9 VAC 5-80-110, 9 VAC 5-50-260, 3-1-94 NSRPC 6)

4. *Plant # 12, mini-plant finishing controls:* Volatile organic compound (VOC) emissions from almost all VOC based finishing, including spraying all frames, moldings, flat boards, and the main on-line touch-up, and their ovens, shall be controlled by catalytic oxidizer VOC fume incineration. The VOC fume incinerator's VOC control efficiency shall be 95% at a minimum. The VOC fume incinerator shall be provided with adequate access for inspection and maintained by the permittee such that it is in proper working order. The manganese dioxide catalytic fume incinerator shall maintain a minimum combustion zone inlet temperature of 550 degrees F.
(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-50-20, 9 VAC 5-50-40, 3-1-94 NSRPC 8)

5. *Plants # 1 plus # 5 finishing throughput:* The throughput of VOC in finishing and related materials shall not exceed 109 tons per month and 654.5 tons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. (9 VAC 5-80-110, 9 VAC 5-170-160, 10-24-85 NSRPC 10)

6. *Plant # 12, mini-plant finishing throughput:* The throughput of VOC in finishing and related materials for VOC based on-line finishing frames, moldings, flat material, and the main touch-

up system (all normally controlled by VOC fume incineration) shall not exceed 58 tons per month and 402 tons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. These throughput quantities are based on the VOC control efficiency and VOC emission limit for this equipment. (9 VAC 5-80-110, 9 VAC 5-170-160, 3-1-94 NSRPC 13)

7. *Plant # 12, mini-plant finishing throughput:* The throughput of coatings for VOC based on-line finishing frames, moldings, flat material, and the main touch-up system (all normally controlled by VOC fume incineration) shall not exceed 21,000 gallons per month and 147,000 gallons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. These throughput quantities are based on the VOC content, VOC control efficiency and VOC emission limit for this equipment. (9 VAC 5-80-110, 9 VAC 5-170-160, 3-1-94 NSRPC 11)

8. *Plant # 12, mini-plant finishing throughput:* The throughput of VOC in finishing and related materials for the off-line repair spray booth system (normally not controlled by VOC fume incineration) shall not exceed 1.7 tons per month and 6 tons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. These quantities are based on the VOC emission limit for this equipment. (9 VAC 5-80-110, 9 VAC 5-170-160, 3-1-94 NSRPC 14)

9. *Plant # 12, mini-plant finishing throughput:* The throughput of coatings for the off-line repair spray booth system (normally not controlled by VOC fume incineration) shall not exceed 500 gallons per month and 1808 gallons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. These quantities are based on the VOC content and the VOC emission limit for this equipment. (9 VAC 5-80-110, 9 VAC 5-170-160, 3-1-94 NSRPC 12)

10. *Plant # 12, mini-plant finishing throughput:* The throughput of VOC in finishing and related materials for the miscellaneous finishing that is not controlled by VOC fume incineration (currently includes (a) water based roll coater and (b) VOC based on-line touch-up spray booth primarily for inside corners) shall not exceed 1.5 tons per month and 9 tons per year, with the annual amount calculated monthly as the sum of each consecutive twelve (12) month period. These quantities are based on the VOC emission limit for this equipment. (9 VAC 5-80-110, 9 VAC 5-170-160)

11. *Plants #1 plus #5 finishing emissions:* Emissions from the operation of the finishing process for plants #1 plus #5 shall not exceed the limits specified below:

Volatile Organic Compounds	109. tons/mo	654.5 tons/yr

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-80-1700, 9 VAC 5-170-160, 10-24-85 NSRPC 10)

12. *Plant # 12, mini-plant finishing emissions:* Emissions from the mini-plant VOC based on-line finishing of frames, moldings, flat material, and the main touch-up system (all controlled by the VOC fume incinerator) shall not exceed the limits specified below:

Volatile Organic Compounds	8.2 lbs/hr	20.1 tons/yr

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-80-1700, 9 VAC 5-170-160, 3-1-94 NSRPC 19)

13. *Plant # 12, mini-plant finishing emissions:* Emissions from the operation of the mini-plant off-line finishing repair process (normally not controlled by VOC fume incineration) shall not exceed the limits specified below:

Volatile Organic Compounds	5.0 lbs/hr	6.0 tons/yr

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-80-1700, 9 VAC 5-170-160, 3-1-94 NSRPC 20)

14. *Plant # 12, mini-plant finishing emissions:* Emissions from the operation of mini-plant miscellaneous finishing that is not controlled by VOC fume incineration (currently includes (a) water based roll coater and (b) VOC based on-line touch-up spray booth primarily for inside corners) shall not exceed the limits specified below:

Volatile Organic Compounds	1.5 tons/mo	9.0 tons/yr

(9 VAC 5-80-110, 9 VAC 5-170-160)

15. *Plants #1 and #5 finishing visible emissions:* Visible emissions from each finishing spray booth shall not exceed twenty (20) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-80-110, 9 VAC 5-50-80)

16. *Plant # 12, mini-plant finishing visible emissions:* Visible emissions from any mini-plant finishing emission point shall not exceed five (5) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-80-110, 9 VAC 5-50-260, 3-1-94 NSRPC 23)

Monitoring/O & M/Recordkeeping:

The permit includes requirements for monitoring and maintaining records of all monitoring and testing

required by the permit. The inspections, maintenance, monitoring and recordkeeping requirements in this section, plus monitoring and recordkeeping under the Facility Wide and General Conditions Sections below, constitute the **periodic monitoring** requirements for this equipment group. The monitoring and records include:

1. Visible emissions periodic monitoring is required to assure control equipment maintenance and compliance with permit visible emission limits. This requires a weekly observation, and its recording, of each operating emission point in this emissions group to check for any visible emission. If any visible emission is observed, the condition shall be corrected and recorded, or a 40 CFR 60 Appendix A Method 9 visible emission evaluation performed and recorded to check opacity compliance. This requirement is to assure good control of overspray particulates. Refr. 9 VAC 5-80-110 E.

2. Develop an inspection schedule, monthly at a minimum, to insure the operational integrity of the overspray collectors and plant #12, mini-plant, VOC fume incinerator and the particulate eliminator to protect its catalytic oxidizer, and maintain records of inspection results.

3. Develop a maintenance schedule and maintain records of maintenance, have written operating procedures available, train operators in the proper operation of the equipment, and maintain an inventory of spare parts needed to maintain the overspray collectors in proper working order to minimize emissions.

4. The permittee shall maintain records of all *finishing* emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, West Central Regional Office. These records shall include, but are not limited to:

    a. Plants #1 plus #5, plant #12 mini-plant, *throughput*: Monthly and annual throughput of finish and related materials containing VOC in gallons, finish solids in tons, and VOC in tons for the VOC content of finish and related material. The VOC content shall be based on Certified Product Data Sheets, 40 CFR 60 Appendix A Method 24, or DEQ approved equivalent. The annual quantities shall be calculated monthly as the sum of each consecutive twelve (12) month period. Records shall be kept of the separate quantities for (1) plants #1 plus #5 combined (no VOC fume incineration), (2) the VOC fume incineration portion of plant #12 mini-plant (identified above), (3) the plant #12 off-line repair system (no VOC fume incineration), and (4) the plant #12 miscellaneous finishing without VOC fume incineration (identified above).

    b. Plants #1 plus #5, plant #12 mini-plant *emissions*: Monthly and annual VOC emissions in tons. The VOC content shall be based on Certified Product Data Sheets, 40 CFR 60 Appendix A Method 24, or DEQ approved equivalent. The annual quantities shall be calculated monthly as the sum of each consecutive twelve (12) month period. Records shall be kept of the separate

quantities for (1) plants #1 plus #5 combined (no VOC fume incineration), (2) the VOC fume incineration portion of plant #12 mini-plant (identified above), (3) the plant #12 off-line repair system without VOC fume incineration, and (4) the plant #12 miscellaneous finishing without VOC fume incineration (identified above). The emission factors and emission calculation equations used in these emission calculations shall be identified and readily available. (Except for VOCs removed from the facility as waste or liquid, all the VOC throughput evaporates on-site.)

1) The equation to calculate VOC emissions that are not incinerated follows:

VOC emissions = VOC throughput.
VOC throughput = VOC received - VOC removed as liquid waste or unused material.

2) The equation to calculate VOC emissions that are incinerated follows:

VOC emissions = VOC throughput x (1 – incinerator VOC destruction efficiency*)
VOC throughput = VOC received - VOC removed as liquid waste or unused material.
* Such as 95% VOC destruction efficiency for the VOC fume incinerator.

c. *Plant #12, mini-plant VOC fume incinerator (catalytic oxidizer*): Devices shall be installed, maintained and operated to continuously measure the temperature before and after the catalyst bed. The results shall be recorded at least weekly.

d. *Plant #12, mini-plant VOC fume incinerator (catalytic oxidizer)*: Devices shall be installed, maintained and operated to continuously measure the pressure drop across the catalyst bed. The results shall be recorded at least weekly.

e. *Plant #12, mini-plant VOC fume incinerator (catalytic oxidizer)*: The permittee shall maintain records of the manufacturer's recommendations for catalyst bed replacement and records of actual catalyst bed replacement.

f. Records as required by the rest of this Monitoring and Recordkeeping section.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-80-110, 9 VAC 5-40-50, 9 VAC 5-50-50, 3-1-94 NSRPC 25)

Testing: The permit does not require source tests for this process. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method - Subject to DEQ approval at the time of the test

	(except for Method 9). (40 CFR Part 60, Appendix A)
Visible Emissions	EPA Method 9
VOC from VOC fume incinerator	EPA Method 25, 25A, or DEQ approved method.
VOC	40 CFR 63 Subpart JJ Wood Furniture MACT Certified Product Data Sheets, 40 CFR 60 Appendix A method 24, or DEQ approved equivalent.

Reporting: Title V semi-annual reports of the results of monitoring and recordkeeping for each first and second half calendar year are required to be submitted to DEQ by each March 1 and September 1 respectively.

EMISSION UNIT APPLICABLE REQUIREMENTS - Facility Wide Conditions.
40 CFR 63 Subpart JJ (Wood Furniture MACT).

This MACT is applicable to this plant. The mandatory compliance date has past. The plant is in compliance with the MACT. The facility is required to be operated in compliance with the MACT. Much of this MACT (several pages) is repeated in this Title V permit for informational purposes under the section on facility wide conditions. For the materials and processes currently used at this plant, the principal portion of the MACT that is applicable to this facility concerns the VHAPS in much of finishing. The plant's principal way of meeting the MACT is to normally use only MACT compliant coatings.

Streamlined Requirements

Streamlining 1: ES-B: Boilers - SO2. The 9 VAC 5-40-930A1 limit of 2.64 lbs SO2/million Btu for each boiler is streamlined out by limiting fuels to wood, which has negligible sulfur content, and No. 1 or No. 2 distillate fuel oil auxiliary fuel. No. 2 fuel oil means 0.5% sulfur maximum, which calculates to a cleaner SO2 emission rate of approximately 0.52 lb/million Btu, using the current 9/98 revision AP-42 emission factor of 142S lb/1000 gal. [(142S) x (S = 0.5) x (1/137 million Btu/1000 gal) = 0.52 lb/million Btu].

Streamlining 2: Plant #12, mini-plant: ES-WD & ES-F: Woodworking & Finishing:
Visible Emissions - The 9 VAC 5-50-80 regulation limiting visible emissions to 20% opacity except for 30% during one six minute period per hour for plant #12, mini-plant, woodworking and finishing processes, is streamlined out by the more restrictive 3-1-94 NSRPC 21 & 23 limitation of 5% opacity except for 30% during one six minute period per hour.

Streamlining 3: Plant #12, mini-plant: ES-WD: Woodworking: Particulate Emissions - The 9 VAC 5-40-2270 regulation limiting woodworking particulate emissions to 0.05 grain/scf of exhaust to atmosphere is streamlined out by the more restrictive 3-1-94 NSRPC 18 limitation of 0.005 grain/scf.

Streamlining 4: Obsolete conditions: The conditions in the NSR permit are streamlined out which deal with new equipment installation time frames and startup initial notifications, initial visible emissions evaluations, and initial stack tests because these conditions are obsolete due to having been completed for all permitted equipment.

Streamlining 5: The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or excess emissions, including those caused by upsets, within four daytime business hours.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

NA. State only toxics limits for this facility are located in a state only section of the 12-24-85 NSR permit, as revised 10-8-87 and 8-18-00 and therefore omitted from the Title V permit.

FUTURE APPLICABLE REQUIREMENTS

NA.

INAPPLICABLE REQUIREMENTS

NA. The state only toxics conditions in the NSR permit are in a state only section of the NSR permit.

COMPLIANCE PLAN

NA because this facility is considered to be in compliance.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.
The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (5-80-720 C)
N/A	Total of eight (8) lumber drying kilns	9 VAC 5-80-720 B	VOC (less than 5 tpy). (approx. 0.4 tpy actual).	(Total 500,000 Brd-ft per 2 wks.)
N/A	Gluing	9 VAC 5-80-720 B	VOC (less than 5 tpy). (approx. 2.4 tpy actual)	
N/A	Emergency Diesel Fire Pump	9 VAC 5-80-720 C		255 hp
N/A	Maintenance Parts Washer	9 VAC 5-80-720 A		

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was published in the October 28, 2001 edition of the *Roanoke Times*. Public comments were accepted from October 28, 2001 through November 28, 2001. The only comments were from EPA. EPA commented by e-mail on November 29, 2001. Although this comment was the day after the public comment period closed for the "draft" permit, EPA still wants their comments considered for the permit to pass EPA's subsequent review of the "proposed" permit. All comments were considered and included as detailed in the Response to Comments letter. EPA chose to not comment during their subsequent 12-20-01 through 2-04-02 "proposed" permit review period.

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